

July 19, 2004

What is claimed is:

1. A process for producing multicoat color and/or effect paint systems
on substrates, comprising – atop one another in this order –
 - 5 (A) at least one first color and/or effect coat,
 - (B) at least one second color and/or effect coat, and
 - (C) at least one transparent coat,
- 10 by successively applying at least one physically or thermally curable
aqueous coating material (A), at least one thermally curable
aqueous coating material (B), and at least one coating material (C)
to
 - 15 (i) an unprimed substrate,
 - (ii) a substrate coated with at least one uncured or only part-
cured primer (G) or
 - (iii) a substrate coated with at least one full-cured primer (G)
- 20 and jointly curing
 - (1) the resulting wet films (A), (B), and (C), or
 - (2) (A), (B), and (C) and the uncured or only part-cured primer(s)
(G),
- 25 wherein the coating material (A) comprises
 - (a.1) at least one (co)polymer or graft copolymer preparable by
(co)polymerizing a monomer (a.1.1) containing at least one
30 copolymerizable, olefinically unsaturated group or at least

July 19, 2004

5 two comonomers (a.1.1) in the presence of at least one
polyurethane (a.1.2) selected from the group consisting of
polyurethanes containing no copolymerizable, olefinically
unsaturated groups and polyurethanes containing at least
one lateral and/or at least one terminal copolymerizable,
olefinically unsaturated group, and optionally carrying out
partial or complete neutralization,

10 (a.2) at least one color and/or effect pigment,

(a.3) at least one UV-absorbing pigment, and

(a.4) talc.

15 2. The process as claimed in claim 1, wherein the (co)polymerizable,
olefinically unsaturated groups of the (co)monomers (a.1.1) are
selected from the group consisting of (meth)acrylate, ethacrylate,
crotonate, cinnamate, vinyl, vinyl ether, vinyl ester,
dicyclopentadienyl, norbornenyl, isoprenyl, isopropenyl, allyl or
20 butenyl groups, dicyclopentadienyl ether, norbornenyl ether,
isoprenyl ether, isopropenyl ether, vinyl ether, allyl ether or butenyl
ether groups, or dicyclopentadienyl ester, norbornenyl ester,
isoprenyl ester, isopropenyl ester, vinyl ester, allyl ester or butenyl
ester groups.

25 3. The process as claimed in claim 1 or 2, wherein the polyurethane
(a.1.2) comprises at least one lateral and/or at least one terminal
copolymerizable, olefinically unsaturated group.

30 4. The process as claimed in claim 3, wherein the copolymerizable,

July 19, 2004

olefinically unsaturated groups of the polyurethane (a.1.2) are selected from the group consisting of (meth)acrylate, ethacrylate, crotonate, cinnamate, vinyl, vinyl ether, vinyl ester, dicyclopentadienyl, norbornenyl, isoprenyl, isopropenyl, allyl or
5 butenyl groups, dicyclopentadienyl ether, norbornenyl ether, isoprenyl ether, isopropenyl ether, vinyl ether, allyl ether or butenyl ether groups, or dicyclopentadienyl ester, norbornenyl ester, isoprenyl ester, isopropenyl ester, vinyl ester, allyl ester or butenyl ester groups.

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5. The process as claimed in claim 4, wherein the copolymerizable, olefinically unsaturated groups of the polyurethane (a.1.2) are vinyl groups.

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6. The process as claimed in claim 5, wherein the vinyl groups of the polyurethane (a.1.2) are contained in ethenylarylene groups.

7. The process as claimed in claim 6, wherein the polyurethane (a.1.2) is preparable by

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(1) reacting at least one polyurethane prepolymer (a.1.2.1) containing at least one free isocyanate group with

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(2) at least one adduct (a.1.2.2) obtainable by reacting at least one ethenylarylene monoisocyanate and at least one compound containing at least two isocyanate-reactive functional groups

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with one another such that at least one isocyanate-reactive functional group remains in the adduct (a.1.2.2).

July 19, 2004

8. The process as claimed in claim 7, wherein the isocyanate-reactive functional group is selected from the group consisting of hydroxyl groups, thiol groups and primary and secondary amino groups.

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9. The process as claimed in claim 7 or 8, wherein the ethenylarylene monoisocyanate has the general formula I:



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in which the definition of the variables is as follows:

A = substituted or unsubstituted C₆-C₂₀ arylene radical;

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R = hydrogen atom, halogen atom, nitrile group or a substituted or unsubstituted alkyl, cycloalkyl, alkylcycloalkyl, cycloalkylalkyl, aryl, alkylaryl, cycloalkylaryl, arylalkyl or arylcycloalkyl radical; and

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X = divalent organic radical.

10. The process as claimed in claim 9, wherein the arylene radical A is 1,2-, 1,3- and/or 1,4-phenylene, especially 1,3-phenylene.

25 11.

The process as claimed in one of claims 1 to 10, wherein the polyurethane (a.1.2) contains hydrophilic functional groups, especially carboxylic acid groups and/or carboxylate groups.

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12. The process as claimed in any of claims 1 to 11, wherein the color and/or effect pigment (a.2) is selected from the group consisting of

July 19, 2004

organic and inorganic color pigments, optical effect pigments, color and optical effect pigments, magnetically shielding pigments, electrically conductive pigments, anticorrosion pigments, fluorescent pigments, and phosphorescent pigments.

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13. The process as claimed in any of claims 1 to 12, wherein the UV-absorbing pigment (a.3) is selected from the group consisting of titanium dioxide pigments and carbon black pigments.

10 14. The process as claimed in claim 13, wherein the coating material (A) comprises a titanium dioxide pigment (a.3) and a carbon black pigment (a.3).

15 15. The process as claimed in any of claims 1 to 14, wherein the coating material (A) comprises at least one additive (a.5).

16. The process as claimed in claim 15, wherein the additive (a.5) is selected from the group consisting of crosslinking agents, oligomeric and polymeric binders other than the (co)polymers and graft copolymers (a.1), organic and inorganic, chromatic and achromatic, transparent and opaque pigments, fillers, and nanoparticles other than the pigments (a.2) to (a.4), organic solvents, driers, antisetling agents, UV absorbers, light stabilizers, free-radical scavengers, devolatilizers, slip additives, polymerization
20 inhibitors, defoamers, emulsifiers, wetting agents, adhesion promoters, leveling agents, film-forming auxiliaries, rheology control additives, and flame retardants.

25 17. The process as claimed in any of claims 1 to 16, wherein the coating materials (A) and (B) are applied with a wet film thickness
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July 19, 2004

such that, after curing, a dry film thickness (A + B) totaling from 10 to 25 μm results.

5 18. The process as claimed in any of claims 1 to 17, wherein the coating material (A) is applied in a wet film thickness such that, after curing, a dry film thickness of from 8 to 12 μm results.

10 19. The process as claimed in any of claims 1 to 18, wherein the coating material (B) is applied with a wet film thickness such that, after curing, a dry film thickness of from 6 to 10 μm results.

15 20. The process as claimed in any of claims 1 to 19, wherein the substrates are bodies of means of transport and parts thereof, buildings and parts thereof, doors, windows, furniture, small industrial parts, mechanical, optical, and electronic components, coils, containers, packaging, hollow glassware, and articles of everyday use.